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L5: Entry 18 of 292

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Dec 14, 2000

DERWENT-ACC-NO: 2001-091163

DERWENT-WEEK: 200229

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TITLE: Catalyst suspension for ring-opening alkylene oxide polymerization to give polyetherols, comprises a plate-like crystalline multi-metal cyanide compound(s), an organic complex builder(s), a polyether(s) and/or a surface active materials(s)

INVENTOR: BAUER, S; BAUM, E ; DEXHEIMER, E M ; ERBES, J ; GROSCH, G H ; HARRE, K ; JUNGE, D ; LORENZ, R ; OSTROWSKI, T

PRICRITY-DATA: 1999US-0324271 (June 2, 1999)

PATENT-FAMILY:

| PUB-NO | PUB-DATE | LANGUAGE | PAGES | MAIN-IPC |
|-------------------|-------------------|----------|-------|------------|
| WO 200074843 A1 | December 14, 2000 | G | 029 | B01J027/26 |
| EP 1189695 A1 | March 27, 2002 | G | 000 | B01J027/26 |
| AU 200053958 A | December 28, 2000 | | 000 | B01J027/26 |
| US 20020006864 A1 | January 17, 2002 | | 000 | B01J027/26 |

INT-CL (IPC): B01 J 27/26; C08 G 65/12

ABSTRACTED-PUB-NO: US20020006864A

BASIC-ABSTRACT:

NOVELTY - Catalyst suspension with high activity comprises a plate-like crystalline multi-metal cyanide compound(s), water, an organic complex builder(s), a polyether(s) and/or a surface active materials(s)

DETAILED DESCRIPTION - Catalyst suspension comprises:

- (a) crystalline multi-metal cyanide compound(s) containing at least 30 wt.% plate-like particles;
- (b) an organic complex builder(s);
- (c) water; and/or
- (d) a polyether(s); and/or
- (e) a surface active material(s).

INDEPENDENT CLAIMS are also included for:

- (1) the preparation of the above suspensions by combining a metal salt with a cyanide compound in the presence of a complex builder and/or a surface active material(s);
- (2) the preparation of polyetherols by ring-opening polymerization of alkylene oxides using the above compounds as catalyst and the obtained polyetherols.

USE - For the preparation of polyetherols of mol. wt. 500-50000 Dalton and functionality 1-8.

ADVANTAGE - Catalyst activity in polyether polyol production is greatly increased and thus the amount of catalyst can be reduced (to below 100 ppm).

ABSTRACTED-PUB-NO:

WO 200074843A EQUIVALENT-ABSTRACTS:

NOVELTY - Catalyst suspension with high activity comprises a plate-like crystalline multi-metal cyanide compound(s), water, an organic complex builder(s), a polyether(s) and/or a surface active materials(s)

DETAILED DESCRIPTION - Catalyst suspension comprises:

- (a) crystalline multi-metal cyanide compound(s) containing at least 30 wt.% plate-like particles;
- (b) an organic complex builder(s);
- (c) water; and/or
- (d) a polyether(s); and/or
- (e) a surface active material(s).

INDEPENDENT CLAIMS are also included for:

- (1) the preparation of the above suspensions by combining a metal salt with a cyanide compound in the presence of a complex builder and/or a surface active material(s);
- (2) the preparation of polyetherols by ring-opening polymerization of alkylene oxides using the above compounds as catalyst and the obtained polyetherols.

USE - For the preparation of polyetherols of mol. wt. 500-50000 Dalton and functionality 1-8.

ADVANTAGE - Catalyst activity in polyether polyol production is greatly increased and thus the amount of catalyst can be reduced (to below 100 ppm).

WEST Search History

DATE: Wednesday, May 14, 2003

| <u>Set Name</u> | <u>Query</u> | <u>Hit Count</u> | <u>Set Name</u> |
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| <i>DB - DWPI; PLUR - YES; OP - OR</i> | | | |
| L6 | L3 not l5 | 292 | L6 |
| L5 | L3 and (carbondioxide\$ or dioxide\$) | 5 | L5 |
| L4 | L3 and polycarbonate\$ | 0 | L4 |
| L3 | L2 and (platelet\$ or crystal\$) | 297 | L3 |
| L2 | l1 and cataly\$ | 5761 | L2 |
| L1 | cyanide\$ or cyano\$ | 54842 | L1 |

END OF SEARCH HISTORY

(12) NACH DEM VERTRAG ÜBER DIE INTERNATIONALE ZUSAMMENARBEIT AUF DEM GEBIET DES
PATENTWESENS (PCT) VERÖFFENTLICHTE INTERNATIONALE ANMELDUNG(19) Weltorganisation für geistiges Eigentum
Internationales Büro(43) Internationales Veröffentlichungsdatum
14. Dezember 2000 (14.12.2000)

PCT

(10) Internationale Veröffentlichungsnummer
WO 00/74843 A1(51) Internationale Patentklassifikation⁷: B01J 27/26, (74) Gemeinsamer Vertreter: BASF AKTIENGE-
C08G 65/12 SELLSCHAFT; D-67056 Ludwigshafen (DE).

(21) Internationales Aktenzeichen: PCT/EP00/04569

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19. Mai 2000 (19.05.2000)

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(71) Anmelder (für alle Bestimmungsstaaten mit Ausnahme von US): BASF AKTIENGESELLSCHAFT [DE/DE]; D-67056 Ludwigshafen (DE).

(72) Erfinder; und

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Veröffentlicht:

- Mit internationalem Recherchenbericht.
- Vor Ablauf der für Änderungen der Ansprüche geltenden Frist; Veröffentlichung wird wiederholt, falls Änderungen eintreffen.

Zur Erklärung der Zweibuchstaben-Codes, und der anderen Abkürzungen wird auf die Erklärungen ("Guidance Notes on Codes and Abbreviations") am Anfang jeder regulären Ausgabe der PCT-Gazette verwiesen.

(54) Title: SUSPENSIONS OF PLATELIKE MULTIMETAL CYANIDE COMPOUNDS, THEIR PRODUCTION AND THE USE THEREOF FOR PRODUCING POLYETHER ALCOHOLS

(54) Bezeichnung: SUSPENSIONEN VON PLÄTTCHENFÖRMIGEN MULTIMETALLCYANIDVERBINDUNGEN, DEREN HERSTELLUNG UND DEREN VERWENDUNG ZUR HERSTELLUNG VON POLYETHERALKOHOLEN

(57) Abstract: The invention relates to a catalyst suspension for carrying out the ring-opening polymerization of alkylene oxides containing: a) at least one multimetal cyanide compound having a crystalline structure and a content of platelike particles of at least 30 wt. % with regard to the multimetal cyanide compound; b) at least one organic complexing agent and/or; c) water and/or; d) at least one polyether and/or; e) at least one surface-active substance with the provision that at least constituent a) and at least two constituents b) to e) must be present.

(57) Zusammenfassung: Die Erfindung betrifft Katalysatorsuspension zur ringöffnenden Polymerisation von Alkylenoxiden, enthaltend a) mindestens eine Multimetallcyanidverbindung mit kristalliner Struktur und einem Gehalt an plättchenförmigen Teilchen von mindestens 30 Gew.-%, bezogen auf die Multimetallcyanidverbindung, sowie b) mindestens einen organischen Komplexbildner und/oder c) Wasser und/oder d) mindestens einen Polyether und/oder e) mindestens eine oberflächenaktive Substanz mit der Maßgabe, daß mindestens Komponente a) und mindestens zwei der Komponenten b) bis e) anwesend sein müssen.

WO 00/74843 A1

WEST Search History

DATE: Wednesday, May 14, 2003

| <u>Set Name</u> | <u>Query</u> | <u>Hit Count</u> | <u>Set Name</u> |
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| <i>DB DWPI; PLUR YES; OP OR</i> | | | |
| L8 | L7 and l5 not l6 | 37 | L8 |
| L7 | ((c08g\$)!IPC.) | 138870 | L7 |
| L6 | L5 and polycarbonate\$ | 37 | L6 |
| L5 | L4 and l2 | 301 | L5 |
| L4 | L3 and l3 | 114360 | L4 |
| L3 | polycarbonate\$ or carbonate\$ | 114360 | L3 |
| L2 | L1 and catalys\$ | 5324 | L2 |
| L1 | cyano\$ or cyanide\$ | 54842 | L1 |

END OF SEARCH HISTORY

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|-------------|--------|--|--------------------|---------------------|
| 1 | 1108 | ((528/421) or (528/419) or (528/405) or (528/415) or (528/411) or (528/412)).CCLS. | USPAT; US-PGPUB | 2003/05/14 12:43 |
| 2 | 100505 | polycarbonate\$ or polyethercarbonate\$ | USPAT; US-PGPUB | 2003/05/14 12:44 |
| 3 | 29 | poly adj ether adj carbonate\$ | USPAT; US-PGPUB | 2003/05/14 12:45 |
| 4 | 5 | poly adj ethercarbonate\$ | USPAT; US-PGPUB | 2003/05/14 12:45 |
| 5 | 99 | ((528/421) or (528/419) or (528/405) or (528/415) or (528/411) or (528/412)).CCLS.) and ((polycarbonate\$ or polyethercarbonate\$) or (poly adj ether adj carbonate\$) or (poly adj ethercarbonate\$)) | USPAT; US-PGPUB | 2003/05/14 13:14 |
| 6 | 10303 | cyano\$ same cataly\$ | USPAT; US-PGPUB | 2003/05/14 13:20 |
| 7 | 3971 | cyanide\$ same catalys\$ | USPAT; US-PGPUB | 2003/05/14 13:22 |
| 8 | 218 | (cyanide\$ same catalys\$) and ((polycarbonate\$ or polyethercarbonate\$) or (poly adj ether adj carbonate\$) or (poly adj ethercarbonate\$)) | USPAT; US-PGPUB | 2003/05/14 13:23 |
| 9 | 214 | ((cyanide\$ same catalys\$) and ((polycarbonate\$ or polyethercarbonate\$) or (poly adj ether adj carbonate\$) or (poly adj ethercarbonate\$))) not (((528/421) or (528/419) or (528/405) or (528/415) or (528/411) or (528/412)).CCLS.) and ((polycarbonate\$ or polyethercarbonate\$) or (poly adj ether adj carbonate\$) or (poly adj ethercarbonate\$))) | USPAT; US-PGPUB | 2003/05/14 13:24 |